

DOCUMENT RESUME

ED 188 051

CG 014 445

AUTHOR Swoboda, Marian Jean
TITLE Profile of Enrollments by Instructional Program Areas: A Study of Traditional and Non-Traditional Choice of Disciplines by Women.
PUB DATE 10 Apr 80
NOTE 29p.; Paper presented at the Annual Convention of the National Association of Women Deans, Administrators, and Counselors (64th, Cincinnati, OH, April 9-12, 1980).
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Career Choice; Educational Trends; *Enrollment Trends; *Females; Higher Education; *Majors (Students); *Nontraditional Occupations; Sex Role; Sex Stereotypes; Trend Analysis; *Womens Education

ABSTRACT

Women have traditionally entered courses of study congruent with social sex-role stereotypes. Two critical questions were examined with regard to their choice of college major--whether traditional or non-traditional. Women and men enrolled in 22 instructional program areas in the University of Wisconsin system for the years 1973-74 and 1977-78 were compared. Women continue to dominate the areas of home economics, library science, foreign languages, health professions, education, fine and applied arts, and public affairs and services. Women are also moving into non-traditional areas, although neither their percent of total enrollment or their actual numbers approach those of men. The greatest movement of women into non-traditional majors is in the area of business and management, followed by agriculture and natural resources, biological sciences, and engineering. (Author)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED 188051

PROFILE OF ENROLLMENTS BY INSTRUCTIONAL PROGRAM AREAS...

A Study of Traditional and Non-Traditional

Choice of Disciplines by Women

by

Dr. Marian Jean Swoboda

Assistant to the President

University of Wisconsin System

April 10, 1980

CG 014445

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

2

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Marian Swoboda

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Table of Contents

	<u>Page</u>
Background	1
Methods Summary	2
Findings	4
Summary	12
Implications	13
Appendixes	
A. Enrollment by Instructional Program Areas	15
B. Percent of Women by Instructional Program Areas.	17
C. Majors Within Instructional Program Areas	19

PROFILE OF ENROLLMENTS BY INSTRUCTIONAL PROGRAM AREAS...A Study
of Traditional and Non-Traditional Choice of Disciplines by Women

Background

The number of women enrolled in undergraduate, graduate, and professional study in the University of Wisconsin System¹ increased substantially during the last six years. At the beginning of the 1972-73 academic year there were 57,057 women enrolled. Six years later, at the beginning of the 1978-79 academic year, 72,411 women were enrolled. The enrollment of men during the same period declined slightly. The number of men enrolled at the beginning of the 1972-73 academic year was 76,268 compared to 75,523 at the start of the 1978-79 academic year, a decline of 745.

Because of this increase in the enrollment of women in the University of Wisconsin System, coupled with the knowledge that women have traditionally entered courses of study congruent with social sex-role stereotypes, it was considered an appropriate time to examine in depth two critical questions in regard to the choice of disciplines by women. The first major question addressed is: Are women leaving their traditional fields of study, and if so, to what degree? The second question is: Are women entering non-traditional majors, and if so, to what extent? The importance of these questions and of the study rests with the need to know whether or not women are entering areas of study through which equity in the world of work and careers can best be achieved.

¹ The University of Wisconsin System is comprised of: Thirteen universities, organized as a doctoral cluster of two universities (UW-Madison and UW-Milwaukee) with program entitlement at the baccalaureate, master's, specialist, advanced professional, and doctoral levels, and a university cluster of eleven universities (UW-Eau Claire, UW-Green Bay, UW-LaCrosse, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-River Falls, UW-Stevens Point, UW-Stout, UW-Superior, and UW-Whitewater) with program entitlement at the baccalaureate, master's and specialist levels; a Center System of fourteen campuses offering two-year transfer and associate degree programs; and University Extension responsible in cooperation with the campuses for statewide outreach services.

At the present time women are not found in very large numbers in those instructional program areas considered to be the traditional training ground for leadership roles in industry and business, in education, or in the scientific world. And, it is not likely that the situation will change until the realities of sex-role stereotyping in education and career selection are addressed and overcome.

Although this study is primarily concerned with women, it is not possible to analyze their choice of discipline without also examining the choice of discipline by men. Major choices made by men are therefore also considered.

Methods Summary

This study concerns itself with those students at the junior level and above because a major is generally not declared until the junior year. Students at the junior level or above who had not declared a major are not included in the study.² The study sample includes 25,134 women in 1973 and 28,889 in 1977; 35,482 men in 1973 and 35,135 in 1977, for a total of 60,616 students in 1973 and 64,024 in 1977.

The data for the study is based upon 1973-74 and 1977-78 fall enrollments. It is presented in graph form in appendices A and B.

Appendix A compares the actual enrollment change for women and men between 1973-74 and 1977-78 by instructional program area. The program areas are listed in order of greatest enrollment of women in 1973-74. Appendix B shows the percent women were of total enrollment in 1973-74 and in 1977-78 by instructional program area.

² The number of students at the junior level and above who had not declared a major in 1973 was 6,227 (2296 women and 3931 men) and in 1977, 6,073 (2615 women and 3458 men).

The three levels referred to in the study are as follows:

- Level II - Juniors and Seniors
- Level III - Masters and Education Specialists
- Level IV - Ph.D. students and upper-level graduate students

Throughout the study the terms "traditional" and "non-traditional" program areas for women are used. Within the confines of the HEGIS taxonomy,³ it has been established that the instructional program area will be considered traditional where women represent one-half or more of the total 1973-74 enrollment. Areas will be considered non-traditional where women rank, in terms of percent of total enrollment, in the bottom one-half. The traditional program areas in rank order are: home economics, library science, foreign languages, health professions, education, fine and applied arts, public affairs and services, letters, and areas studies. The non-traditional areas in rank order are: engineering, agriculture and natural resources, business and management, architecture and environmental design, physical sciences, computer and information sciences, law, mathematics, biological sciences and social sciences, interdisciplinary studies, communication, and psychology.

Although the decision to designate these categories as either traditional or non-traditional for the purposes of this study was arbitrary, the pattern which emerged corresponds roughly to a study by Hooper and Chandler.⁴ This is especially true with regard to the non-traditional fields.

³ The instructional program areas described in the study are based upon the Higher Education General Information Survey (HEGIS) taxonomy. One of the difficulties in using this taxonomy for purposes of this study is that an area might contain individual majors with widely divergent percentages of women. For example, the social science category includes sociology, where the enrollment of women is generally high and economics, where enrollment is generally low. For this reason the twenty-two instructional program areas identified in the study are listed in Appendix C. One further problem with the data bears mentioning. Where a major appears only for 1973-74 or 1977-78, the potential for skewing the category total exists. Majors appearing in only one year are noted in Appendix C.

⁴ Mary E. Hooper and Margaret O. Chandler, Earned Degree Conferees 1968-69: Part B--Institutional Data, U.S. Office of Education, Government Printing Office, Washington, D.C., 1971 as quoted in Saul D. Feldman's Escape From the Doll's House.

Findings

The findings of the study will be presented in terms of the twenty-two instructional program areas found in the HEGIS taxonomy. The program areas identified as traditional for women will be examined first, followed by an examination of the non-traditional areas.

Traditional Instructional Program Areas

Home Economics. In 1973-74, women accounted for 96 percent of the total enrollment in home economics at levels II and above. This percentage had dropped slightly by 1977-78 to 93.6 percent. However, women are definitely not leaving the field. In 1973-74 there were only 699 women enrolled, compared to 1177 in 1977-78. The greatest growth for both men and women in this field was at level II. For women the growth occurred primarily in dietetics, fashion merchandising, home economics in business, and retailing. For men the most notable percentage increase occurred in dietetics. Men moved in total numbers in home economics from 29 in 1973-74 to 73 in 1977-78. This is noteworthy when considering the decline in the total enrollment of men.

Library Science. In library science women remained almost the same in total numbers between 1973-74 and 1977-78. The percentage of women students increased, however, because men are leaving the area at a faster rate than women. Women now constitute 78.3 percent of the library science majors. Their concentration is at level III, while more men are at level IV.

Foreign Languages. There was a decrease in the total number of both men and women in foreign languages. The percent of men and women remains about the same, indicating both are leaving the field at about the same rate. The actual number of women leaving the field, however, is greater--a drop of 189 women compared to 39 men. The traditional foreign languages--French, Spanish and German--have experienced the largest decline in students. A

small number of students are venturing into other foreign languages at the doctoral cluster. Overall, women still dominate the foreign language majors, and account for 66.7 percent of the total enrollment.

Health Professions. The total number of women enrolled in the health professions increased from 3,331 in 1973-74 to 3,518 in 1977-78. The percent of women also increased from 68 percent to 70 percent. The number of men decreased from 1,553 in 1973-74 to 1,507 in 1977-78.

Within the health professions area there are two majors which would be considered non-traditional majors for women: medicine and pharmacy. Women increased their enrollment in both of these areas. However, the real numbers were not large and it needs to be noted that while women increased their enrollment in pharmacy, the number of men dropped. Enrollment of both men and women increased, however, in medicine. Women increased at a faster rate than men, changing from 99 students enrolled in 1973-74 to 170 in 1977-78 while men increased from 436 to 487.

There are a number of majors within the health professions which by virtue of the percentage of women enrolled would be considered traditionally women's fields: nursing, communicative disorders, occupational therapy, physical therapy, and medical technology. Enrollment of women in these fields, except for occupational therapy, decreased slightly in absolute numbers. The dramatic change came in medical technology where there was a decrease from 507 to 376.⁵ The number of men enrolled in nursing increased from 140 to 170, and in occupational therapy from 6 to 16. However, in the other fields which would be considered traditional to women the number of men declined.

⁵ This drop may in some part be the result of a system audit of medical technology programs and the subsequent discontinuance of several institutional programs.

Two new majors in the health professions added after 1973-74 account for some of the increase in the total numbers of women. These were community health nursing and physicians assistant. Community health nursing showed an enrollment of 53 women and 3 men in 1977-78 and the physicians assistant program 51 women and 38 men. The decrease in total enrollment in nursing for women is more than offset by the increase represented by their enrollment in community health nursing. It will be interesting to see as the physicians assistant program continues whether this will become a field dominated by women or whether it will continue to be one in which men and women are represented more or less equally.

Education. Education is the category with the largest number of women, and is also one of the areas in which women predominate. In 1973-74, 63.6 percent of the students in education were women. In 1977-78, women comprised 65.3 percent. The number of women majoring in education dropped slightly during this period from 8,543 to 8,531. Education is the second largest category for men, ranking only behind business. The total number of men enrolled in the area of education between 1973-74 and 1977-78 dropped from 4,896 to 4,528, a more substantial drop than for women. Consequently, although the number of women remained fairly static, the percentage of women who account for the total enrollment in education increased during this four-year period.

At level II, the enrollment of women dropped by 626 students while men dropped by 173. At level III, women's enrollment increased by 493 while men's declined by 147. The majors where women increased were elementary reading, educational administration, counseling and guidance, and exceptional education. With the exception of educational administration, men also increased in enrollment in these particular disciplines, but not to the extent of women. Women in educational administration increased by 57

and men decreased by 82. The same basic pattern took place at level IV where women increased by 121 and men decreased by 48.

Fine and Applied Arts. In fine and applied arts, women accounted for 57.1 percent of the student population in 1973-74. By 1977-78 women increased to 62.8 percent. Of the 383 total increase in enrollment, 377 were women and 6 were men. Clearly, women are not leaving the field of fine and applied arts. At level II, where most of the activity takes place, women increased by 350 between 1973-74 and 1977-78 while the number of men increased by 30. Four majors--art, bachelor of fine arts, theater and drama, and dance--account for the major increase of women.

Public Affairs and Services. The overall enrollment of women in public affairs and services increased by 418 while men decreased by 5. It should be noted that this category contains the social work or social welfare major which has traditionally been dominated by women. The number of women enrolled in social work or social welfare remained at 1159 between 1973-74 and 1977-78 while the enrollment of men decreased from 554 to 396. Women and men increased in total enrollment in vocational rehabilitation and in criminal justice.

One major included in this category which shows a substantial change in the percent of women enrolled is in recreation resources. In 1973-74 there were 36 women and 141 men enrolled in this major. By 1977-78 there were 216 women and 139 men.

Letters. In the area of letters the totals for both men and women are dropping, somewhat more for men than for women. The major within this category which shows a large decrease of students is English. The decrease which occurs in the category of letters is occurring generally across all fields and at all levels. Comparative literature, classics, linguistics, and philosophy are some of the principal majors in this area.

Area Studies. There is not a great deal of change for either men or women in area studies. It is a very small category. The real numbers for 1973-74 are 136 and for 1977-78, 166. The number of men increased by 23 and women by 7. Women decreased in percent of total from 50.7 percent to 45.8 percent.

Non-Traditional Instructional Program Areas

Engineering. Engineering is one of the fields most totally dominated by men. In 1973-74 men accounted for 3,031 of the total number of engineering students at the junior level and above, while women numbered only 51, or 1.6 percent of total enrollment. The change from 1973-74 to 1977-78 for women was quite dramatic: enrollment went from 51 to 299. Although the absolute numbers for women compared to the absolute numbers for men are not substantial, there is no question but what women are beginning to move into the field of engineering. It is important to note, however, that the field of engineering is also growing with respect to male enrollments at the same time, with an increase in total enrollment from 3,031 to 3,656. Despite the increase in the number of men entering the field, the number of women is substantial enough to change the percent of the total for women from 1.6 percent in 1973-74 to 7.6 percent in 1977-78.

There is no one engineering major which has attracted a disproportionate number of women. There are several, however, which do have a higher number of women than others: civil and environmental, chemical, and electrical and industrial engineering.

Agriculture and Natural Resources. Agriculture and natural resources is another category which men have traditionally dominated. And here again as with engineering, although the real numbers may be somewhat small for women, there is a substantial increase in the number of women. While the

number of men electing majors within this category also increased, the percentage of women increased from 10.6 percent in 1973-74 to 25.0 percent in 1977-78. In actual numbers women increased by 529 while men increased by 545.

There is no one major where women are clustered. The great increase appears at level II. Some of the majors where the largest number of positive changes occurred are: agricultural journalism, agronomy, soil science, meat and animal science, dairy science, poultry science, wildlife ecology, horticulture, and conservation.

Business and Management. Substantial changes occurred for both men and women in business and management. Women increased from a total of 729 in 1973-74 to a total of 2,327 in 1977-78, and their percentage increased from 11.4 percent to 23.4 percent. One reason that this percentage did not change more in light of the substantial increase in numbers of women is that men also are selecting majors in business and management in ever-increasing numbers. Men in business and management numbered 5,691 in 1973-74 and 7,623 in 1977-78.

The following majors were all chosen by increasing numbers of both men and women and account for the largest increases in student enrollment in the category of business and management: accounting, finance, business administration, management, hotel and restaurant, and marketing. The bulk of the growth occurred at level II. Women are enrolled in all 22 majors appearing under the business and management category for 1977-78.

Architecture and Environmental Design. Architecture and environmental design appears to be a category in which women made gains as substantial as those in engineering. In fact, in terms of their percent of the total student enrollment, their gains appear to be even more substantial. The

total enrollment for women increased from 69 in 1973-74 to 267 in 1977-78. The enrollment for men also increased, but not nearly as much, from 511 to 530. The percentage for women changed from 11.9 percent of the total student enrollment in 1973-74 to 33.5 percent in 1977-78, which appears to be quite a dramatic increase for women in this non-traditional field. However, this is an area where the study of individual majors is essential when viewing the increase.

There is one major in this category which is of particular interest and that is interior design. The major is new to this category as of 1977-78. It appeared as a major in 1973-74 under home economics. This major represents over half of the total number of women in this category as of 1977-78, therefore it must be acknowledged that this major is skewing the total increase. Interior design accounts for 122 of the total 198 increase while landscape architecture accounts for 48, urban and regional planning for 18, and architecture for 10.

Physical Sciences. In the physical sciences the number of women enrolled increased at every level while the number of men decreased. Women thus moved from 12.5 percent of total enrollment in 1973-74 to 16.6 percent in 1977-78. The preponderance of women in this area are in chemistry, followed by geology, earth science and physics. Men are more evenly distributed among majors. Women appear in all majors in this category except astronomy and geophysics.

Computer and Information Sciences. Both men and women increased in enrollment in majors within the computer and information sciences area. However, it is a small category containing only two majors and not very many students, either men or women. Women increased from 41 students in 1973-74 to 81 in 1977-78, and men increased from 246 to 316. Although both

have increased enrollment in this area, proportionally more women have entered this field than men and women thus increased their percentage of the total enrollment from 14.3 percent to 20.6 percent.

Law. Law has, of course, traditionally been dominated by men. However, it is evident that women are increasing their enrollment in this area. Enrollment for women in 1973-74 was 192 and in 1977-78 it increased to 299. Their percent of total enrollment increased from 20.7 percent in 1973-74 to 33.6 percent in 1977-78. The number of men entering law dropped between 1973-74 and 1977-78 from 735 to 592.

Mathematics. Both men and women are leaving the area of mathematics, men at a greater rate than women. Consequently, the percent of women in the total enrollment increased slightly from 26.2 percent to 27.5 percent between 1973-74 and 1977-78.

Biological Sciences. In the biological sciences the number of women increased by 265 between 1973-74 and 1977-78 while the number of men decreased by 208. The greatest increase of women was in biology, bacteriology, plant pathology, biochemistry, molecular biology, genetics, and nutritional sciences.

Social Science. There was a decrease in enrollment for both men and for women in the social sciences area between 1973-74 and 1977-78. The decrease in absolute numbers for men was much more substantial, however, than that for women—men decreased by 1,499, women by 110. Because men are leaving the social sciences area at a greater rate than women, the percentage of women of the total increased from 28 percent in 1973-74 to 34.1 percent in 1977-78.

There are five majors within the social sciences area which account for the largest number of total students: sociology, political science, geography, history, and economics. Sociology has about 50 percent women, while the

other majors are dominated by men. Women show increased enrollment in political science and in economics and decreased enrollment in geography and history.

Interdisciplinary Studies. There was a decrease in enrollment of both men and women in interdisciplinary studies, but men are leaving the area at a much greater rate than women. The enrollment of women decreased from 524 to 508 while the enrollment of men decreased from 910 to 664. Women moved from 36.5 percent of the total to 43.3 percent.

Communications. In the communications area, the numbers of both men and women increased between 1973-74 and 1977-78. Women increased at a slightly greater rate than men, moving women from 40.9 percent to 42.1 percent of the total. Women now total 835 and men 1,149 in the six majors in the area of communications.

Psychology. In the area of psychology the enrollment of both men and women decreased. Because the decrease of men (312) was greater than for women (60), the percent of women in the total enrollment increased from 44.0 percent to 50.8 percent.

Summary

The increased enrollment of women in higher education coupled with the entrance of women into several non-traditional areas of study can be viewed either in terms of how far women have come, or in terms of how far they still have to go. This study views both perspectives. Therefore, the purpose of this study was twofold: first, to see whether or not, and to what degree, women are leaving areas of study traditional to women; and secondly, to find out to what extent, if any, they are entering new, or non-traditional areas of study.

The findings indicated that women are not leaving their traditional areas of study in any substantial numbers. As a matter of fact, many of the traditional areas are growing. Their numbers grew during the past four years in the areas of home economics, public affairs and services, fine and

applied arts, health professions, and area studies. Their relative number to male enrollment also increased in library science, education and letters. Of all women who had declared a major, 58.4 percent were concentrated in education, health professions, public affairs and services, fine and applied arts, and home economics.

At the same time that women continue to enter traditional areas of study, they are also moving into non-traditional areas. Their percent of total enrollment or their actual numbers in these areas, however, do not begin to approach those of men. The greatest increase for women into non-traditional majors in terms of numbers was in the areas of business and management, followed by agriculture and natural resources, biological sciences and engineering.

In 1973-74, 73.0 percent of the women were enrolled in the nine program areas considered traditional in this study. By 1977-78, only 66.4 percent were enrolled in these nine areas. During these years, the enrollment of women had increased by 3,755. In comparison, the percentage of men enrolled in the areas non-traditional for women, or traditional for men, in 1973-74 was 70.0 percent. By 1977-78 the percentage increased to 72.0 percent in spite of the fact that overall enrollment of men decreased by 347. Thus men are increasing in enrollment in even larger relative numbers in some of the areas non-traditional to women, notably in business and management, agriculture and natural sciences, and engineering.

It appears from this study when women move into non-traditional areas of study, they often choose majors that resemble socially defined areas for women. For example, in the field of engineering women have avoided nuclear and mining engineering and chosen chemical or environmental engineering. In agriculture and natural resources, women are more likely to choose food science, conservation or horticulture rather than farm management or agricultural economics. In the biological sciences no women are found in biophysics

or neurosciences. The majority are found in majors like biology, botany, nutritional sciences, zoology or biochemistry. Likewise in the physical sciences the preponderance of women are in chemistry rather than majors like geophysics or astronomy.

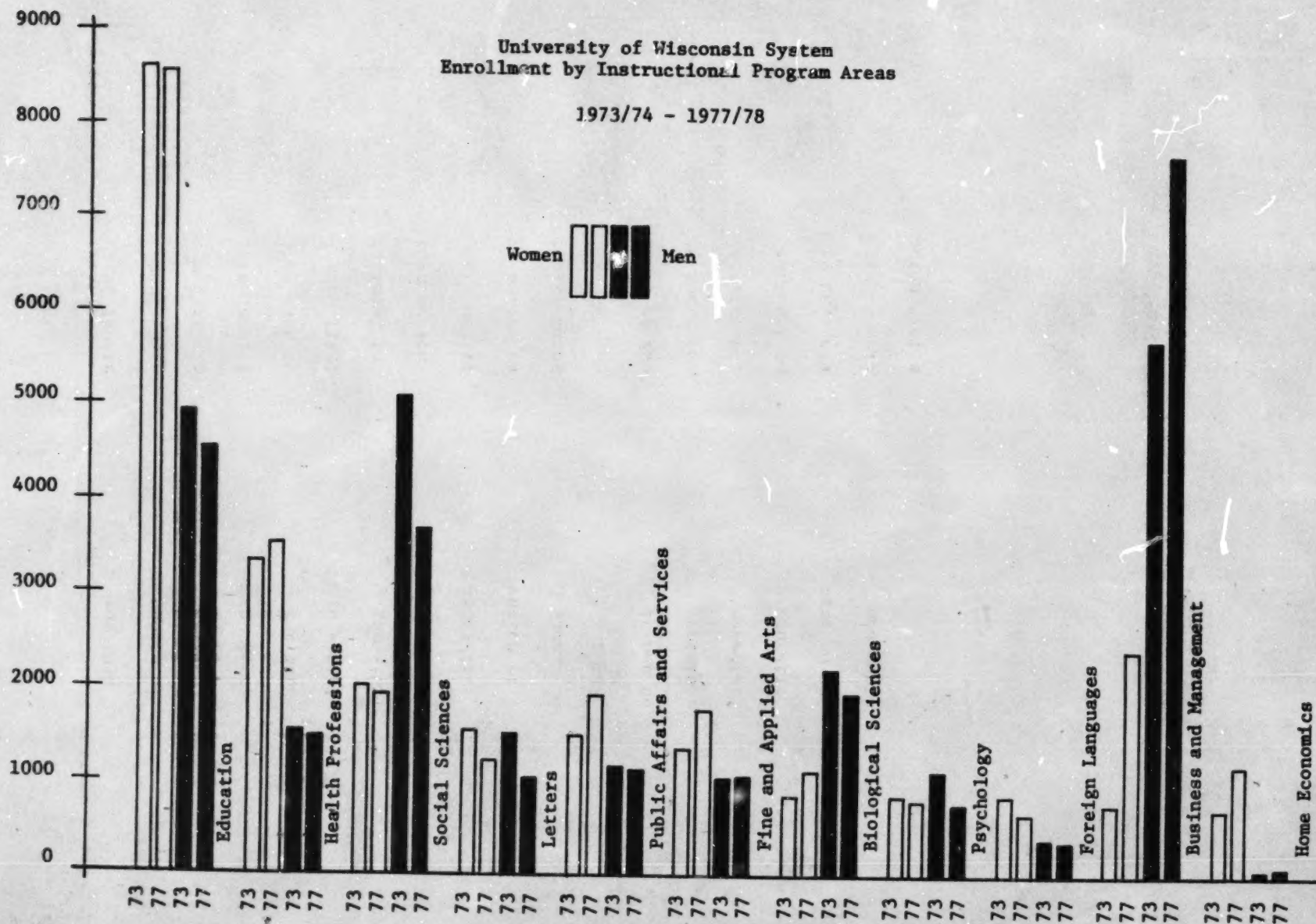
Implications

There are several implications to be drawn from this study. First, we need to know more about the relationship between choice of majors and careers. It appears that men are selecting the majors where career options are expanding and are leaving areas where employment prospects are less plentiful at a higher rate than women. Secondly, the study points out that men are still more likely to go on to graduate school than are women, even in areas traditional to women. And finally, the study reaffirms that continued affirmative action needs to be taken to foster and encourage the entrance of women into non-traditional areas of study if, indeed, it is our desire to achieve a better balance in the distribution of educational choices and opportunity among and between men and women.

Although the sex-differential phenomenon in the selection of educational pursuits cannot be explained conclusively, it has been argued that women often confine their choices because society expects them to select certain socially accepted roles. But choices and expectations are also learned in the educational environment. Thus the educational system is in a unique position to help dispel the myths that tend to nurture and perpetuate the cultural stereotypes which function to direct and control the entrance of women into selected fields of study.

University of Wisconsin System
Enrollment by Instructional Program Areas

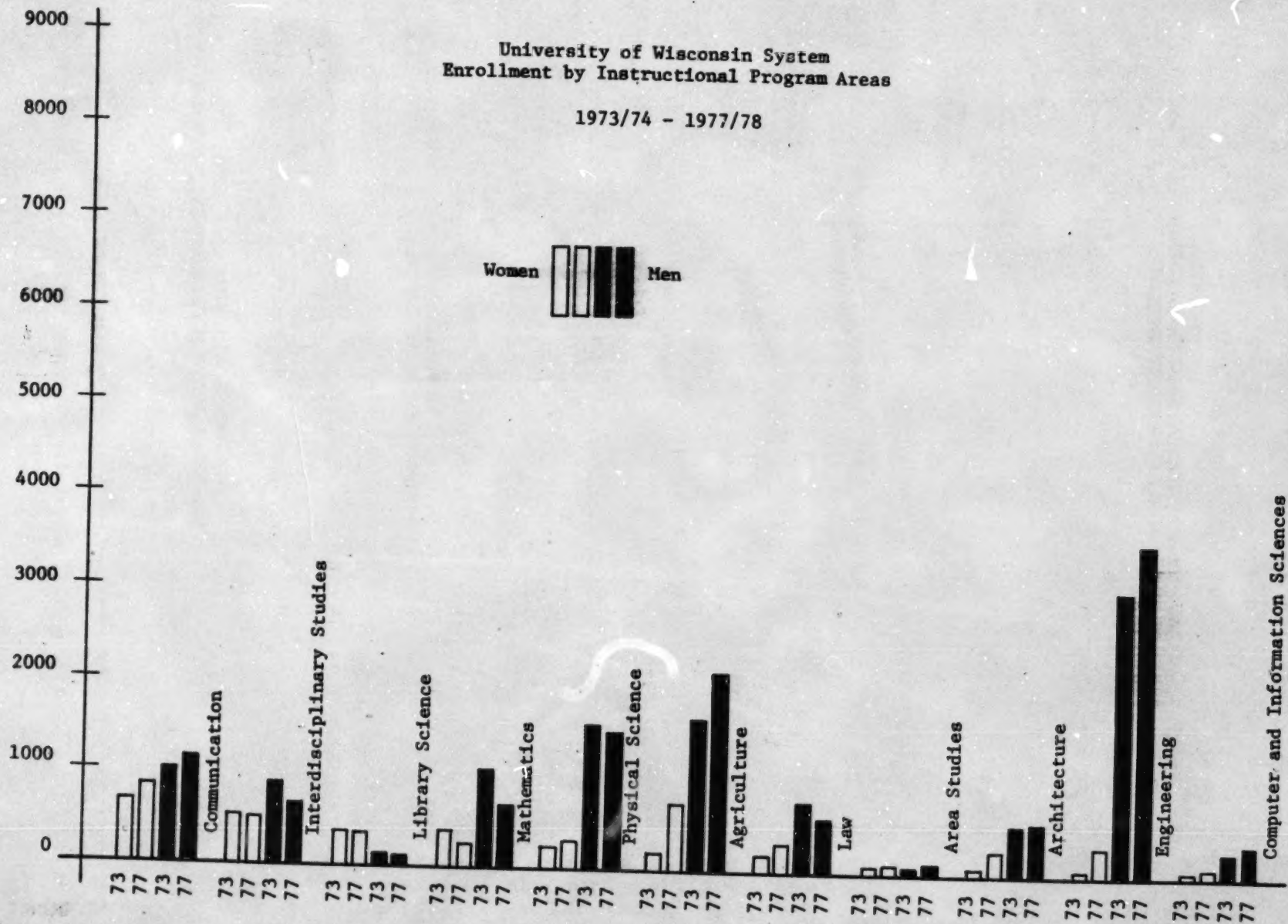
1973/74 - 1977/78



University of Wisconsin System
Enrollment by Instructional Program Areas

1973/74 - 1977/78

16



20

21

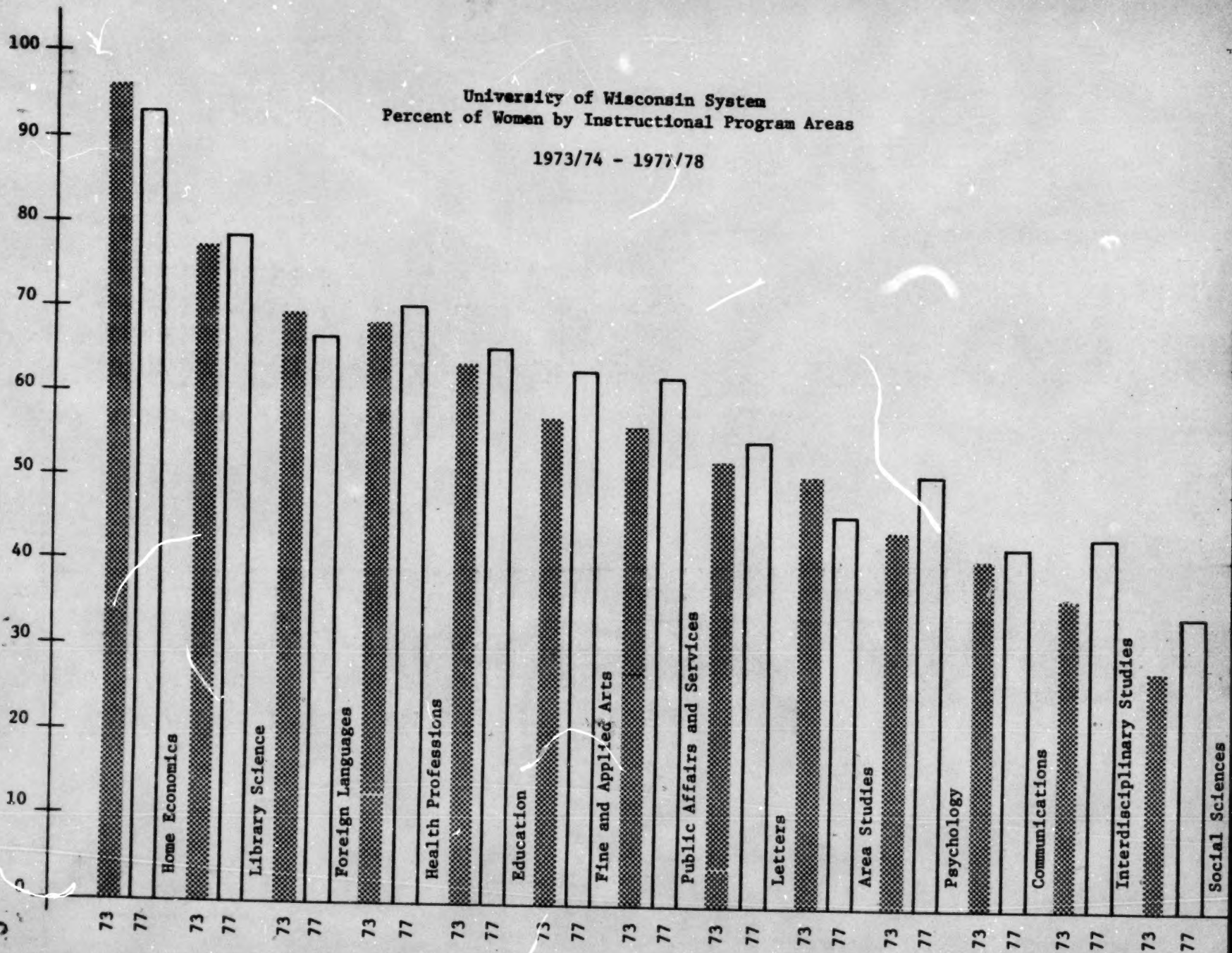
University of Wisconsin System
Percent of Women by Instructional Program Areas

1973/74 - 1977/78

Appendix B

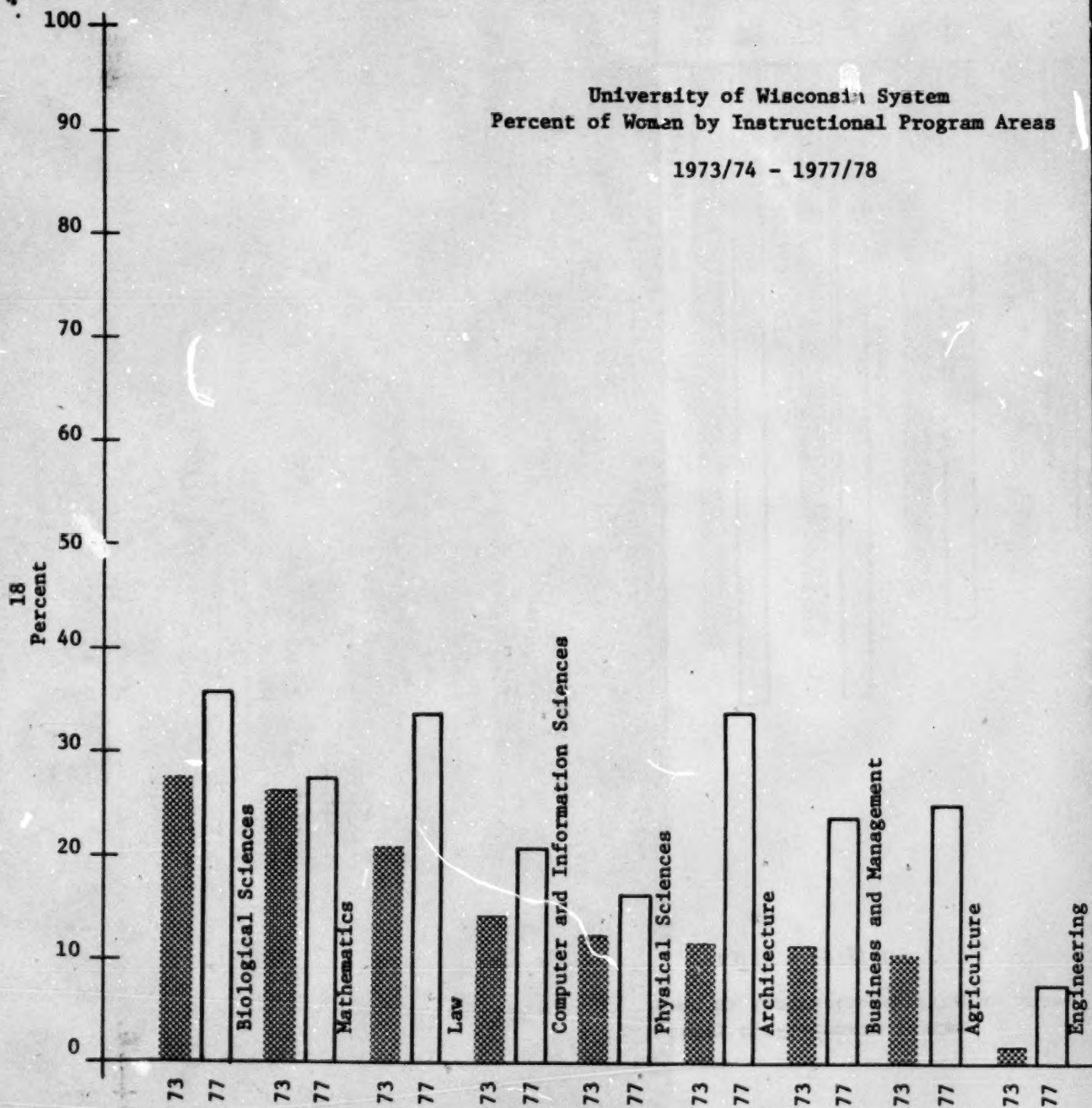
17

Percent



University of Wisconsin System
Percent of Women by Instructional Program Areas

1973/74 - 1977/78



Majors Within Instructional Program Areas

Agriculture and Natural Resources

Agriculture
 Agricultural Journalism
 Agronomy
 Soil Science
 Meat & Animal Science
 Dairy Science
 Poultry Science
 Wildlife Ecology
 Horticulture
 Farm Management
 Agricultural Economics
 **Agricultural and Appl.
 Agricultural Business
 Agricultural Industrial
 Agricultural Marketing
 Food Science
 Food Chemistry
 Forestry
 Forest Science
 Conservation
 Natural Resources
 Agricultural Mechanization
 Construction Administration
 Scientific Land Management
 **Land Resources
 *Agricultural Engineering
 *Biological Aspects of Agriculture
 Rural Sociology
 Water Resources

Architecture and Environmental Design

*Environmental Design
 Architectural Studies
 **Architecture
 **Interior Design
 Landscape Architecture
 Urban and Regional Planning

Area Studies

Asian Studies
 Buddhist Studies
 Indian Studies
 South Asian Studies
 Russian-East Central
 Ibero-American Studies
 Hebrew Studies
 French Area Studies
 *Scandinavian Studies
 American Studies
 **American Institutions
 Hindu Studies

Biological Sciences

Biology
 Botany
 Botany and Zoology
 Education and Botany
 Bacteriology
 Plant Pathology
 Zoology
 Education and Zoology
 Pathology
 Pharmacology-Medical
 **Pharmacology-Pharmacy
 Physiology
 *Physiological Chemist
 **Medical Microbiology
 Anatomy
 Biochemistry
 **Pharmaceutical Biochemistry
 **Biophysics
 Molecular Biology
 *Wildlife Ecology
 Entomology
 Genetics-Agricultural
 Plant Breeding and Pl.
 **Genetics-Medical
 Nutritional Sciences
 **Nutrition
 **Neurosciences
 **Neurophysiology
 **Biological Aspects of
 **Endocrinology-Reproduction
 **Medical Science
 **Pre-Veterinary
 **Veterinary Science

Business and Management

Business Diversified
 Accounting
 Business Statistics
 Actuarial Science
 Finance, Investment A
 Business Administration
 Management
 Office Administration
 Business Construction
 Administrative Science
 Public Management
 Program Administration
 *Operations Research
 Quantitative Analysis
 Hotel and Restaurant
 Marketing

Business (Cont.)

- Transportation
- Real Estate and Urban
- *Appraisal
- Risk and Insurance
- International Business
- Executive Secretarial
- Industrial Relations
- *Information Systems
- *Business and Engineering
- **Arts Administration

Communications

- Communications Arts
- Journalism
- Mass Communications
- **Technical Communications
- Education and Journalism
- **Education and Communications

Computer and Information Sciences

- Computer Sciences
- **Information Systems A

Education

- Elementary Education
- Secondary Education
- Junior High Education
- **Continuing and Vocational
- Exceptional Education
- Mentally Retarded
- Deaf and Hard of Hearing
- Communicative Disorders
- Emotionally Disturbed
- Behavioral Disabilities
- Educational Policy Studies
- **Education Studies
- Pre-School Kindergarten
- *Early Childhood Education
- *Child Development and Education
- Counseling and Guidance
- Rehabilitation Counseling
- Education Administrator
- School Business Management
- School Supervision and Education
- Curriculum and Instruction
- **Curriculum and Supervision
- Elementary/Reading
- Art Education
- Music Education
- *Music Education, Instruction
- Music Education, Vocal
- **Music Education, Elementary
- Music-EME

Physical Education

- *Music-Elementary Education
- Science Education
- *Physical Education, W
- *Physical Education, M
- *Elementary Physical Education
- Safety
- Health Education
- **Community Health Education
- Business Education
- Distributive Education
- Industrial Education
- Technical Education
- *Vocational Education
- **Industrial and Vocational
- Agricultural Education
- Chemistry Course
- Agricultural Extension
- *Cooperative Extension
- Audiovisual Media
- Home Economics Education
- Journalism Education
- Community Education
- Pre and Early Adolescent
- *Theater Arts Education
- Institute of Education
- *Education-Earth Science
- School Psychology
- Natural Science
- Urban Education
- *Education-Botany
- *Education-English
- Education-Geography
- *Education-German
- *Education-History
- *Education-Mathematics
- Education-Music
- **Professional Development

Engineering

- Engineering
- Applied Science
- Agricultural Engineering
- **Biomedical Engineering
- Chemical Engineering
- Civil and Environmental Engineering
- Light Building Construction
- Civil and Environmental Eng. & Co.
- Electrical Engineering
- Mechanical Engineering
- Industrial Engineering
- Metallurgical Engineering
- **Materials Science
- Mining Engineering
- Nuclear Engineering

Engineering (Cont.)

- Engineering Mechanics
- **Water Chemistry
- **Water Resources Management
- **Ocean Engineering
- *American Industry
- Industrial Technology
- **Engineering Technology
- Safety, Occupational

Fine and Applied Arts

- Art
- Art, BFA
- Art History
- **Art History & Criticism
- Music-Applied
- *Music, Instrumental
- Music, Organ
- *Music, Piano
- *Music, Vocal
- *Music-Conducting
- *Music Composition
- **Education and Music
- *Music (BM, Vocal)
- Music-BA
- Music-MA
- Music-Ph.D.
- Music, BM
- *Music (BM, Comprehensive)
- Music (BM, Instrument)
- Music-Ethnomusicology
- **Music-History
- **Music-Theory
- Theatre and Drama
- *Speech, Drama (BA or B)
- Dance
- Performing Arts (Music)
- Visual Arts
- Inter-Arts
- Music Therapy
- *Arts Administration

Foreign Languages

- Foreign Languages
- French
- **Education and French
- German
- **Education and German
- Italian
- Spanish
- Portuguese
- **Education and Spanish
- Russian
- Chinese
- Japanese

Latin

Education and Latin

*Greek

Hebrew

**Hebrew and Semitic Studies

Arabic

**Scandinavian Studies

Slavic Languages

Polish

African Languages

*East Asian Languages

South Asian Languages

Health Professions

- Pharmacy Administration
- Health Services Administration
- **Health Care Fiscal MA
- Nursing
- **Community Health Nursing
- Medicine
- *Medical Science, Pre
- Oncology
- Medical Physics
- Occupational Therapy
- Pharmacy
- Pharmaceutics
- History of Pharmacy
- Hospital Pharmacy
- **Pharmacy-Continuing Education
- **Social Studies in Pharmacy
- Physical Therapy
- Education and Physical Therapy
- Environmental Public
- **Medical Records Administration
- *Veterinary Science
- Communicative Disorders
- Speech Pathology
- Medical Technology
- **Medical Technology, 1
- Radiological Sciences
- Industrial and Environmental
- Medical Microbiology
- Medical Science
- *Medical Genetics
- **Physicians Assistants

Home Economics

- General Home Economics
- Home Economics in Business
- Home Economics Journalism
- Related Art
- Apparel Design
- Textiles and Clothing
- Fashion Merchandising
- Textile Science

Home Economics (Cont.)

- ** Retailing
 - Consumer Science
 - Child Development/Family
- ** Marriage & Family Counseling
- ** Child Development
 - Home Economics, Food
 - Dietetics
 - Food Administration
- * Consumer Service
- * Interior Design
- Related Art (Committee)

Law

- Law
- * Legal Institutions

Letters

- English
- ** Education and English
 - Comparative Literature
 - Classics
 - Linguistics
 - Communication and Pub.
 - Philosophy
 - Communication Process
 - Humanities, Classical
 - Humanities, Modern
 - Language Arts
 - Radio, TV and Film

Library Science

- Library Science

Mathematics

- Mathematics
- Applied Mathematics
- Education and Mathematics
- Statistics
- Computer Sciences & Math.

Physical Sciences

- Naval Science
- * Physical Science
 - Physics
 - Physics-Mathematics
 - Education and Physics
 - Chemistry
 - Chemistry Course
 - Education and Chemistry
- ** Chemistry-Business
- Chemistry-Physics
- ** Analytical Clinical Chemistry
- Pharmaceutical Chemistry
- Astronomy

Astronomy-Physics

- Meteorology
- Geology
- Geophysics
- Geology and Geophysics
- Earth Science
- Education-Earth Science
- **Oceanography and Limn.
- Applied Mathematics A
- **Physiological Chemistry

Psychology

- Psychology

Public Affairs and Services

- Public Policy and Administration
- Recreation Resources
- Recreation Program LE
- Social Work
- Social Welfare
- Criminal Justice
- Sociology-Correctional
- **Legal Institutions
- Vocational Rehabilitation

Social Sciences

- Social Science
- **Social Studies
 - Anthropology
 - Economics
 - Education and Economics
 - History
 - *History and Social Science
 - History of Culture
 - History of Science
- **Education and History
 - Geography
- **Cartography
 - Education and Geography
 - Political Science
 - Education and Political Science
 - Sociology
- **Rural Sociology
 - Education and Sociology
 - Education and Rural Sociology
 - International Relations
 - Afro-American Studies
 - Urban Affairs
- **Urban Social Institutions
 - Metropolitan Region Studies
 - American Institutions
- **Ethnic Studies

Interdisciplinary Studies

- General Curriculum
- Water Chemistry
- General Science
- Mathematics-Science
- *Humanities, Classical
- Humanities, Modern
- *American Institutions
- Social Studies/Languages
- Paper Science
- **Applied Mathematics, Engineering
- Humanism and Cultural
- Communication Action
- *Ecosystems Analysis
- *Environmental Control
- Human Adaptability
- Growth and Development
- *Managerial Systems
- Social Change & Development
- Population Dynamics
- Regional Analysis
- Urban Analysis
- **Science and Environment
- **Environmental Monitor
- **Environmental Arts
- **Behavioral Science
- **Modern American Society
- **Comparative Modern In.
- **Development

* 1973-74 Only
 ** 1977-78 Only